


PROGRAMME SPECIFICATION	 Newcastle University
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1	Awarding Institution	Newcastle University
2	Teaching Institution	Newcastle University
3	Final Award	MSc in Orthodontics
4	Programme Title	MSc in Orthodontics
5	UCAS/Programme Code	5009F/P
6	Programme Accreditation	The Specialist Advisory Committee (SAC) in Orthodontics on behalf of the Joint Committee for Specialist Training in Dentistry (JCSTD) which reports to the General Dental Council and the Dental Faculties and Councils of the Royal Colleges of Surgeons.
7	QAA Subject Benchmark(s)	
8	FHEQ Level	7
9	Date written/revised	July 2021

10	Programme Aims
<p>The aim of the program is to enable dentists to acquire advanced skills and knowledge in the field of Orthodontics. The course is designed to provide the foundations for:</p> <ul style="list-style-type: none"> • Specialist practice • Specialist training in Orthodontics • Clinical academia • Community Dental Services <p>Specifically, the program aims to provide:</p> <ol style="list-style-type: none"> 1. Clinical and laboratory practice involving treatment planning, clinical procedures and technical work for Orthodontic cases requiring primarily routine treatment and some treatment of moderate complexity 2. The ability to evaluate critically the evidence base for Orthodontics 3. Experience of performing applied research within Orthodontics 	

11	Learning Outcomes
<p>The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.</p>	
Knowledge and Understanding	
<p>On completing the programme students should have:</p> <p>A1 a systematic understanding of knowledge within and directly related to Orthodontics, and a critical awareness of current problems and new insights, much of which is at, or informed by, the forefront of the field of study and area of professional practice</p>	

A2 a comprehensive understanding of techniques applicable to Orthodontic practice and their own research

A3 an understanding of the application of clinical and scientific knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline

A4 a conceptual understanding that enables the student:

- to diagnose anomalies of the dentition and cranio-facial structures
- to understand the aetiology of malocclusion
- to understand the clinical approach to management of patients and the timing of treatment appropriate to physical and psychological development
- to understand the principles and practice of orthodontic treatment, including an understanding of a variety of treatment methods
- to understand the principles and practice of cephalometry
- to have an ability to evaluate critically scientific literature and carry a research project through to completion.

Teaching and Learning Methods

Teaching for the knowledge based components of A1, A2, A3 and A4 is mainly by timetabled small group seminars, the majority of which are completed during the first 2 years of the course. Each seminar has a structured reading list which is reviewed annually and prioritized where necessary into essential and recommended reading. Students are expected to prepare for each seminar and to engage in discussion. There is a regular journal club in which students are expected to participate. There are a number of resource days shared with members of the Northern University Consortium (NUC); Leeds, Newcastle, Birmingham, Sheffield, Liverpool and Manchester.

The teaching and learning of research and intellectual skills as they relate to A1-A4 are discussed under 'Intellectual skills'.

Acquisition of the knowledge components of practical and clinical skills as they relate to A1-A4 are discussed under 'Practical Skills'.

Assessment Strategy

Theoretical knowledge (encompassing A1, A2, A3 & A4) is assessed at throughout the course by in-course assessments and end of year examinations.

Clinical knowledge is assessed throughout the course through formative competency exercises. Summative assessment of clinical knowledge is undertaken throughout all assessments, but primarily in the Part 3 examinations.

Intellectual Skills

On completing the programme students should be able to:

B1 Critically evaluate research / research findings and use these to inform clinical practice where appropriate

B2 Interpret clinical findings and observations to make a diagnosis and treatment plan and recognise the need for continuous reassessment as treatment progresses.

B3 Develop a critical attitude towards clinical / treatment outcomes and participate in audit and peer review

B4 Recognise and accept their own limitations and know when, where and how to refer patients if appropriate

Teaching and Learning Methods

Teaching and learning of the theoretical knowledge underpinning these skills is as for A1-A4 above.

Additionally, all students attend a statistics / research methodology course which gives an introduction to research (B1). All students undertake a research project, involving a dissertation element, supervised by at least 2 research supervisors (B1).

All students engage in a weekly journal club meeting which involves critical appraisal of a journal article or case discussion (B1-B3). Critical appraisal of published research is used to inform small group seminars (B1-B3). Students are expected to attend and engage in local and regional audit meetings. (B3)

B2-B4 are also developed clinically, as described below.

Assessment Strategy

The ability to critically appraise evidence is assessed throughout the course through the submission of in-course assessments.

The ability to appraise own research in the context of existing knowledge is assessed in the literature review (formative assessment / feedback), dissertation and linked viva-voce examination associated with the research element of the course (Part 2, summative assessment).

Practical Skills

On completing the programme students should be able to:

C1 Assess, diagnose and formulate an appropriate treatment plan including an organized sequence of delivery and prediction of its course, including any required interceptive measures

C2 Assess prognosis of the preferred treatment option based on clinical outcome studies and audit

C3 Provide treatment for orthodontic patients of moderate complexity

C4 Formulate a clear laboratory prescription and understand the technical procedures involved

C5 Process letters of referral, prioritise appointments, and liaise with general dental practitioners and other healthcare practitioners

C6 Treat patients with respect and without prejudice

Teaching and Learning Methods

Teaching and learning of the theoretical knowledge underpinning these skills is as for A1-A4 above.

Teaching and learning of practical skills commences in year 1 with a laboratory based typodont course, facilitating the acquisition of basic skills. Students receive one-to-one and small group teaching whilst treating / observing patients with orthodontic problems. Each student is allocated suitable patients for the development of treatment and diagnostic skills and are expected to undertake increasingly complex treatment / diagnoses as the course

progresses. Formative clinical competency assessments are undertaken and feedback from these used to inform teaching / learning.

Assessment Strategy

Formative assessment / feedback is undertaken throughout the clinical attachment, as described.

Summative assessment of practical skills is undertaken in the Part 3 examinations. Four fully documented cases treated by the student are presented and assessed. A long unseen case assesses the students ability to undertake a comprehensive patient assessment and formulate an appropriate treatment plan. An oral examination assesses the students understanding of a range of clinical scenarios.

Transferable/Key Skills

On completing the programme students should be able to:

D1 use appropriate IT skills for data analysis and documentation

D2 use efficiently the library and other information retrieval systems

D3 understand that academic and clinical skills need to be constantly reviewed challenged and updated through continuing professional development in which you should play an active part in both receipt and delivery

D4 work in harmony with peers, support staff and teachers with a view to becoming a team leader

Teaching and Learning Methods

Students receive training in IT and information retrieval at the start of the course (D1, D2). D3 is learned and taught through involvement in journal club / audit / clinical governance activities. D4 is acquired through teamworking in seminars and alongside the clinical training.

Assessment Strategy

Summative assessment of in-course assessments and the research element (Part 2) will provide an indication of IT and information retrieval skills (D1, D2). This course runs in parallel with the StR clinical training pathway, which assesses CPD and teamworking as part of the ARCP process (D3, D4), with a similar mechanism operating for non-NHS trainees.

12 Programme Curriculum, Structure and Features

Basic structure of the programme

The 3 year programme (9 terms) comprises 3 main areas:

1. Supervised clinical and laboratory practice involving treatment planning, clinical procedures and technical work for selected cases, including some complex treatments
2. Review of the clinical and scientific evidence base for Orthodontics by means of tutorials, case seminars and practical classes
3. A research project and dissertation demonstrating a candidate's application of scientific method to a problem of relevance to Orthodontics. The structure of the research element may be adapted if the student can demonstrate significant prior research experience (eg. PhD).

Each student is required to keep a clinical portfolio and encouraged to complete a learning portfolio which encourages reflective learning and personal development planning as well as recording meetings, formative and summative assessment. These form part of the NHS ARCP process which runs in parallel with the MSc course, with a similar mechanism operating for non-NHS trainees.

(ii) Curriculum and Structure

The foundation for clinical practice consists of a clinical skills and laboratory course completed during the induction weeks which the student must complete satisfactorily, prior to seeing patients under supervision. During all 3 years students see patients for treatment and diagnosis.

The seminar programme is based a number of compulsory topics as detailed in the SAC curriculum. These cover the general themes of:

- Basic orthodontic subjects.
- General orthodontic subjects.
- Orthodontic techniques.
- Biological sciences relevant to orthodontics.
- Multidisciplinary orthodontics.
- Specific treatment procedures.
- Literature / Research.

The majority of the tutorials are completed by July of the second year. The research project is undertaken during the first 2 1/2 years. During the first year; aims, literature and pilot studies should be completed. Practical work may be spread between both years and writing-up completed for the submission of the dissertation by the end of December in the 3rd year.

Key features of the programme (including what makes the programme distinctive)

Students can expect a high degree of clinical exposure under expert tuition (students have up to 5 Clinical sessions and one diagnostic clinic session per week). There is excellent technical support and students are encouraged to liaise with relevant laboratories. Students are not expected to undertake extensive technical laboratory procedures. The dissertation for the research project is written up as paper(s) for submission to a journal during the third year. This approach will facilitate the candidate getting the work published. Scrutiny of the clinical portfolio will encourage good record keeping.

Graduates may apply on an individual basis for entry to the MOrth examination (Membership in Orthodontics) run by the Royal College of Surgeons. The MSc in Orthodontics programme is not intended as preparation for this examination, but many students will choose independently to sit the examination.

Programme regulations (link to on-line version)

https://teaching.ncl.ac.uk/docs/regdocs2021/documents/-R5009F,%205009P_vFinal.pdf

13 Support for Student Learning

For information on support for student learning please see link below:

https://www.ncl.ac.uk/ltds/assets/documents/qsh_progspec_generic_info.pdf

14 Methods for evaluating and improving the quality and standards of teaching and learning

For information on methods for evaluating and improving the quality and standards of teaching and learning please select link below:

https://www.ncl.ac.uk/ltds/assets/documents/qsh_progspec_generic_info.pdf

15 Regulation of assessment

For information on regulation of assessment please select link below:

https://www.ncl.ac.uk/ltds/assets/documents/qsh_progspec_generic_info.pdf

The University Prospectus: <http://www.ncl.ac.uk/postgraduate/courses/>

Degree Programme and University Regulations: <http://www.ncl.ac.uk/regulations/docs/>

Please note. This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided.